



THE PANORAMA OF NEW YORK CITY

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A History of the World's Largest Scale Model

by Marc H. Miller

The Queens Museum

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ACKNOWLEDGMENTS

For The Queens Museum's premier attraction—The Panorama of New York City—the year 1989 has been particularly satisfying. Not since the Panorama was created 25 years ago as New York City's exhibit at the 1964–1965 New York World's Fair has the model received so much media attention and public interest. As part of The Queens Museum's major exhibition "Remembering the Future" which looked back fondly at the two World's Fairs—the Panorama was again the star attraction of the New York City Building.

Thanks to funds that have been provided by New York State and New York City, the Museum, including the space around the Panorama, will be completely renovated in 1992 and viewer access to the model will be greatly improved.

When the Panorama was first conceived it was designed as a living model that would change and grow in response to the changes within the city it represents. The Queens Museum continues to strive to fulfill this goal. Following the renovation of the Museum space around the Panorama, the model will receive its first complete updating since the mid-1970s thanks to funds provided by the office of the Queens Borough President Claire Shulman. A Panorama Endowment Fund is currently being established to assure future updates. On the occasion of its 25th birthday, we can truly say that the Panorama is alive and well.

As the new Executive Director of The Queens Museum, I would like to acknowledge and thank my predecessor, Janet Schneider, who first initiated this catalogue and whose diligent stewardship has done much to assure the Panorama's future.

The Museum also expresses its thanks to Marc H. Miller, Queens Museum curator, who is the author of this fine catalogue and whose extensive research unearthed many of the forgotten photographs and events pictured herein. Special thanks go to the firm that built the Panorama, Lester Associates, which is still active in West Nyack, New York. Joseph Ivanick, the company's president, not only allowed Dr. Miller complete access to the firm's archives but generously donated to The Queens Museum much of the pictorial material and documentation that was discovered. Mr. Ivanick along with Werner Neuburger and Salvator Todisco of Lester Associates participated in the original construction of the Panorama and their reminiscences were of great value. Thanks is also extended to Gladys Lester, who shared her many memories about the work of her late husband, Raymond Lester.

Over the course of working on the history of the Panorama and its related materials, many people have aided the museum in gathering information and photographs. Among those we would like to thank are Peter Bosselmann, Theodore Conrad, Al Davis of the San-

born Map Co., Helen Harrison, Robert Herbert II, Bruce Milliken of Skidmore, Owings & Merrill, David Oats, James Romano, Laura Rosen of the Triborough Bridge & Tunnel Authority, Bud Stengren of Consolidated Edison Company of New York, Inc., Erica Stoller of Esto Photographics, Peter Warner and Bonnie Yochelson. Thanks are also extended to Nancy Foote and Alan Moore for editorial help.

Many individuals at the Museum were instrumental in accomplishing this catalogue and the exhibition "The Making of the Panorama." In particular I would like to recognize the work of Beth Henriques, Ileen Sheppard, David Rodriguez, Connie Cullen, Phyllis Bilick, Sunday Englis, Fran Hyatt and Lou Acquavita.

The Queens Museum also wishes to acknowledge the continued support and interest of the New York State Legislature in the Museum and the Panorama, particularly the strong, guiding leadership of State Assemblymen Alan Hevesi and Saul Weprin and the other members of the Queens legislative delegation.

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Steven Klindt
Executive Director
The Queens Museum

THE PANORAMA OF NEW YORK CITY

At the heart of The Queens Museum in Flushing Meadow Park sits the Panorama of New York City, a huge three-dimensional scale model of the metropolis that was constructed as New York City's exhibit at the 1964/65 World's Fair. Called at the time of its creation the "World's Largest Scale Model," the Panorama encompasses 9,335 square feet, occupying the former site of a roller skating rink. At a scale of one inch to one hundred feet, it reproduces in exact detail the then-largest city in North America. The model includes in miniature all 320 square miles of New York City's five boroughs—the Bronx, Brooklyn, Manhattan, Queens, and Staten Island. It accurately duplicates the 771 miles of city shoreline, all of the streets, thousands of parks, hundreds of major bridges, and each of its approximately 830,000 individual buildings. The Panorama even includes miniature cars, boats and a moving airplane landing every minute at La Guardia Airport.

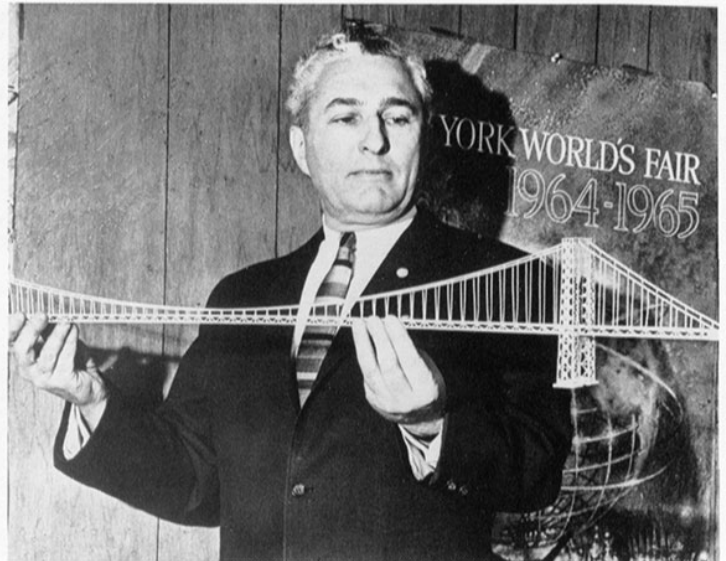
The man responsible for conceiving and building the Panorama was Robert Moses, long-time municipal builder and World's Fair Corporation president. The project was fabricated by the model-making firm of Raymond Lester that had often worked for Moses making large-scale models of his various building projects. Lester Associates gathered and processed all the information needed for the Panorama, constructed the vast, com-

plex model, and finally assembled it in the New York City Building at Flushing Meadow. This colossal task took over three years, required the full-time labor of hundreds of workers, and finally cost \$672,662.69.¹

Despite its high cost the Panorama was clearly a good investment for the city. It was not only one of the most successful exhibits at the 1964 World's Fair, but later served as a planning tool for the city. Since 1972 it has been a popular and useful attraction at The Queens Museum, which occupies the former fair's New York City Building. The Panorama is admired as a masterpiece in a long tradition of model-making, and functions as a learning tool helping everyone—from tourists and school children to sophisticated urban planners—understand a complex city.

ROBERT MOSES AND RAYMOND LESTER

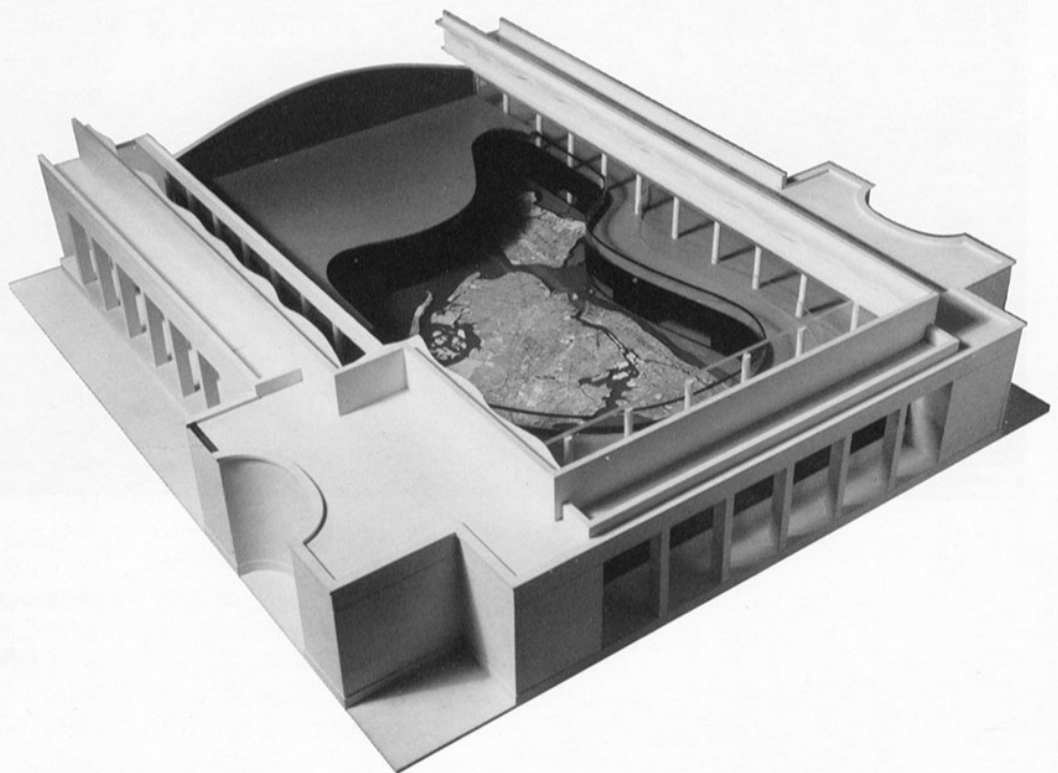
It is appropriate that the person behind the construction of the Panorama was Robert Moses (1888–1981), the man perhaps most responsible for shaping the physical structure of 20th-century New York City. Starting in the early 1920s, with the seaside recreational area at Jones Beach on Long Island, until his forced retirement over fifty years later with plans still on his drawing boards, Moses—working in a variety of city and state positions—completely transformed



ABOVE, LEFT:
*Robert Moses, president of the
1964-65 New York World's Fair
Corporation, c. 1964.*

ABOVE, RIGHT:
*Raymond Lester holding model
of the George Washington Bridge
for the Panorama of
New York City, c. 1964.*

RIGHT:
*Model by Lester Associates of the
New York City Pavilion with its
roof removed to show the location
of the Panorama, 1961. Collection
of The Queens Museum.*





Aerial photograph by Aero Service Corporation showing the west side of midtown Manhattan (used during the construction of the Panorama), c. 1961.



Section of the Panorama showing the same view (scale 1" to 100') on display at New York City Hall before being installed at the New York City Building, 1963.



Robert Moses (center) with a model of the Jones Beach recreation area on Long Island, n.d.

the city through an ambitious building program of parks, roadways, bridges, public housing and major civic structures. The achievements of Moses' half-century career are astounding: Orchard Beach, Flushing Meadow Park, the Central Park Zoo, the Astoria Pool, the Grand Central Parkway, the Belt Parkway, the Long Island Expressway, the Triborough Bridge, the Verrazano Narrows Bridge, Stuyvesant Town, Co-op City, Lincoln Center, the United Nations complex, Shea Stadium, and the New York Coliseum are only some. Robert Caro's biography of Moses, *The Power Broker*, says, "He personally conceived and completed public works costing 27 billion dollars—the greatest builder America (and probably the world) has ever known."²

Since the 14th century in Italy the building profession has recognized the value of three-dimensional miniatures for determining design and winning public support. In his construction of public works, Moses used architectural models as aids in both the planning and promotion of projects. At the Queens Museum is a large model of the New York City Building created by Moses to promote Flushing Meadow Park and the upcoming 1939 World's Fair. In the collection of the Triborough Bridge & Tunnel Authority are three different models showing different schemes for the controversial and finally unbuilt Mid-Manhattan Expressway. Moses often made elaborate displays in public lobbies using models and large illustrations to

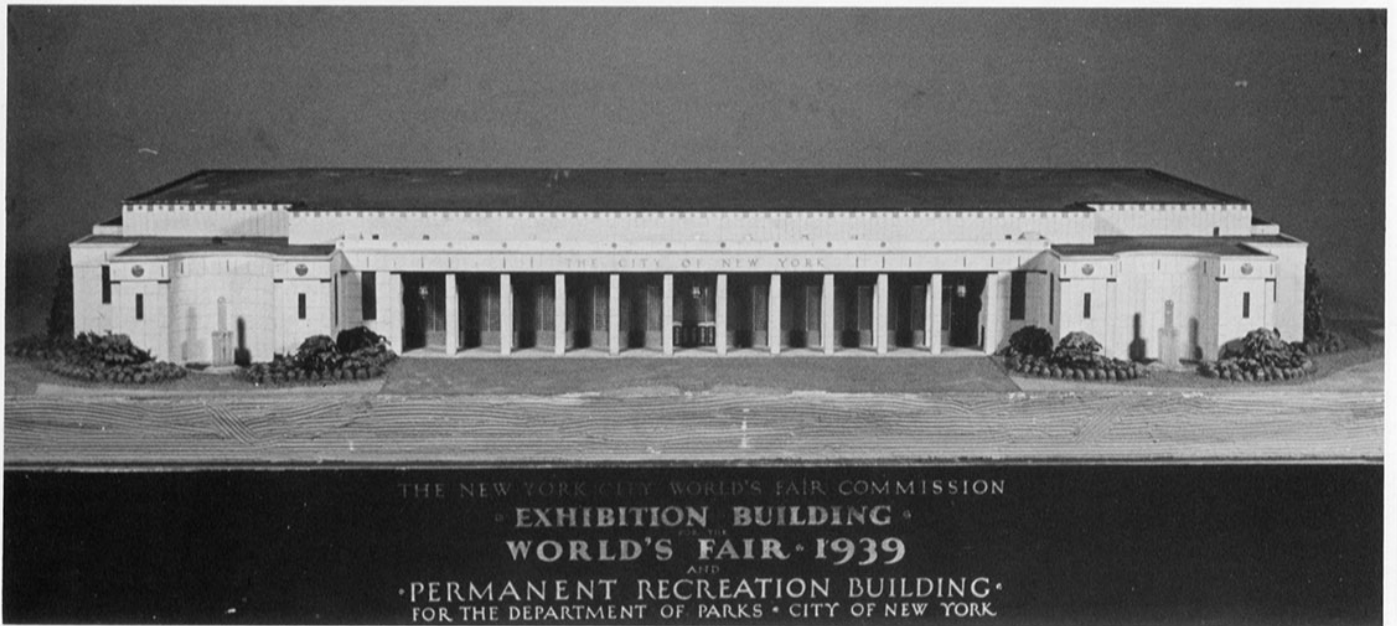
coalesce support for new projects. As Moses' building projects grew in scale and ambition, the models he commissioned in the 1950s became bigger and more elaborate. It was during this latter phase of his career that he first employed the model-making firm of Lester Associates.

Born in 1911, Raymond Lester made his first model at twelve. The young model-railroad enthusiast supported himself as a graphic artist before landing his first professional model-making job with the Architectural and Scientific Corporation doing work for the 1939 New York World's Fair. During the years of World War II, Lester worked for the naval architects Gibbs & Cox, making scientifically exact ship models for struc-

RIGHT:
*Model of proposed United Nations
Headquarters at Flushing Meadow
Park on public display, 1946.*



BELOW:
*Model of the New York City
Pavilion for the 1939 World's
Fair, c. 1937. Architect: Aymar
Embury II. Collection of The
Queens Museum.*



RIGHT:
*Robert Moses (right) looking
at Lester's terrain model of
the St. Lawrence River Power
Project at the visitors center of
the Robert Moses Power Plant,
Niagara, N.Y., 1958.*



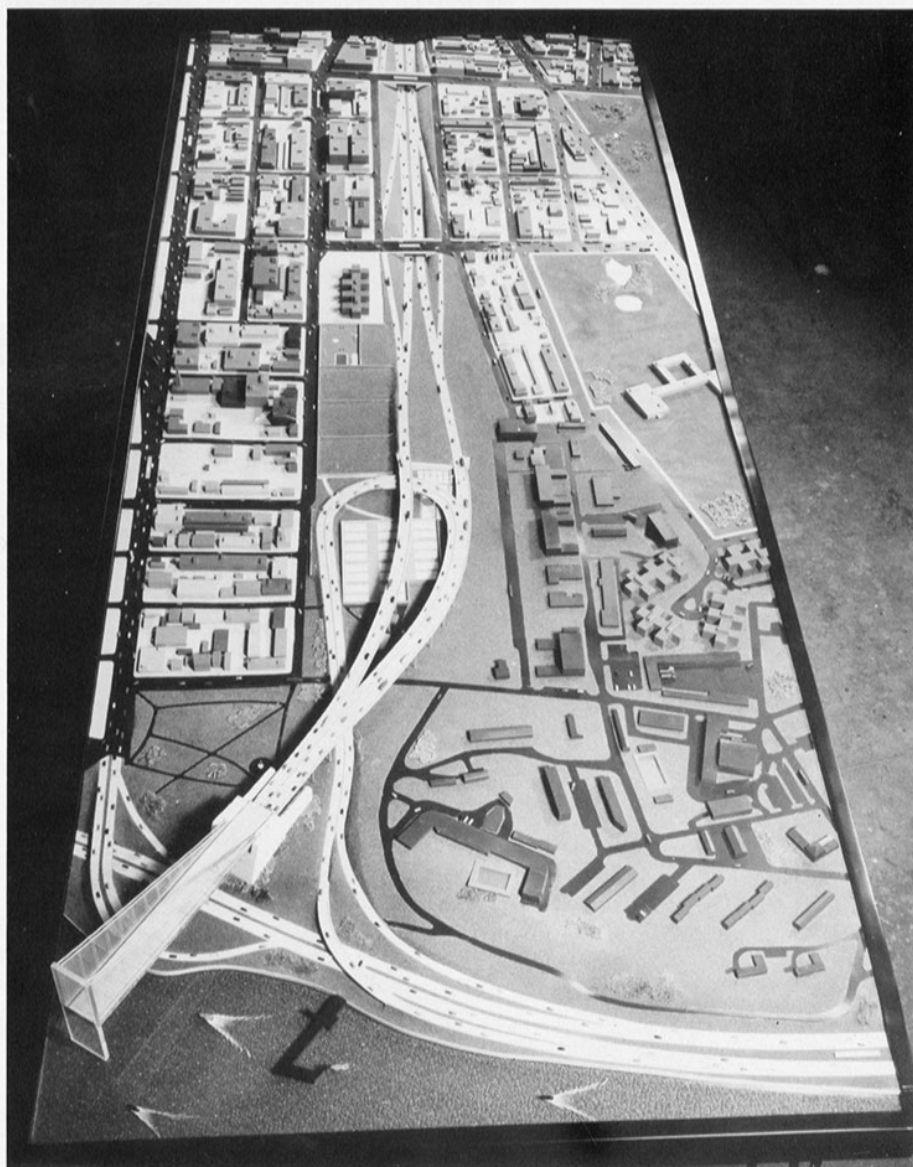
BELOW:
*Model by Lester Associates of
The New York Coliseum, 1954.
Collection of the Triborough
Bridge and Tunnel Authority, on
long-term loan to The Queens
Museum.*



tural tests of the destroyers the company manufactured. With the war over, Lester opened his own model shop in New York's Greenwich Village in 1945. Within a few years he built a much larger shop in Westchester County, New York, to serve a list of clients that had grown to include major architectural firms such as Harrison & Abramovitz, the United States Government (both the Navy and the Atomic Energy Commission), and major corporations like I.B.M. and General Electric. Lester Associates made a full range of models—architectural, terrain, and engineering models, product prototypes and full-size operational test models as well as room-sized industrial control boards and industrial displays.³

In 1954 Lester did his first work for the Triborough Bridge & Tunnel Authority, a relatively simple model of the New York Coliseum being planned for Columbus Circle. Over the next 15 years Lester would serve as Moses' principal model-maker, working for the variety of agencies headed by the building czar on a host of different projects, from small individual models to large public displays. The bulk of Lester's work was large terrain models of the ambitious highway and bridge projects of Moses' later years. Using scales that ranged from one inch to 150 feet up to one inch to 50 feet, Lester made terrain models for such Moses projects as the Verrazano Narrows Bridge, the Throgs Neck Bridge, the never-completed Long Island Sound Bridge, the Sheridan Expressway, and the unbuilt Lower Manhattan and Mid-Manhattan expressways. These models accurately recorded the topography and buildings of large sections of the city, work that prepared Lester for his biggest model-making task—The Panorama of New York City.

*Model by Lester Associates of
Verrazano Narrows Bridge,
Brooklyn Approach
(scale: 1" to 60'), 1956.
Collection of the Triborough
Bridge and Tunnel Authority.*





TOP:
Mayor Fiorello La Guardia on a promotion tour in Chicago with model of the 1939 World's Fair, October 1938.



BOTTOM:
President John F. Kennedy and Robert Moses with model of the 1964/65 World's Fair (scale: 1" to 32'), at the Fair Administration Headquarters, Flushing Meadow Park, December 1962.

THE 1964/65 NEW YORK WORLD'S FAIR

Soon after his appointment as president of the 1964/65 New York World's Fair Corporation in February of 1960, Moses started putting together the team needed to create the ambitious spectacle. Moses had served as Mayor Fiorello La Guardia's representative in the city's dealings with the 1939 World's Fair Corporation, witnessing firsthand the popular success of the 1939 fair's large model exhibits like General Motors' Futurama. He saw too how the 1939 Fair Corporation used models both to plan and promote the fair. Moses later hired Lester Associates to make models for the 1964/65 Fair Corporation, and arranged for the firm to do additional work on fair displays sponsored by New York City and New York State.⁴

Back in 1939, the corporation required all fair participants to submit models of their pavilions for approval. These models were then incorporated into a large-scale model of the Flushing Meadow fair site, located at the Fair Corporation's offices in the Empire State Building. A second model of the 1939 fair, small enough to travel to promotional events in other states, was also constructed by the fair's design department. For the 1964/65 Fair Corporation, Lester followed suit. A large model showing the '64 Fair at a scale of 1 inch to 32 feet measured 60 by 20 feet, and sat in its own "model room" at Fair Corporation headquarters in Flushing Meadow Park. As each fair participant finalized its pavilion design, Lester made a pavilion model for the fairground layout. Dignitaries, potential fair exhibitors and members of the press all transited the model room during the never-ending rounds of promotion preceding opening



RIGHT:
*"Travel" model by Lester
Associates of the 1964/65
World's Fair (Scale: 1" to 100'),
c.1963.*

BELOW:
*Model by Lester Associates of the
1964/65 World's Fair (scale: 1" to
32') at Fair Headquarters in
Flushing Meadow Park, c. 1964.*



day.⁵ Lester built seven small "travel" models at a scale of 1 inch to 100 feet, each covered with a plastic dome, which were used to promote ticket sales.

THE NEW YORK CITY PAVILION

As the host city of the 1964 World's Fair, New York was determined to have a lavish display. The Board of Estimate allocated \$2,278,366 to architect Daniel Chait to refurbish the the New York City Building built for the 1939 fair, and \$620,000 to Lester Associates to construct the Panorama and the pavilion's other interior exhibits. The city pavilion and its displays were conceived by Moses, although nominally the city official in charge of the pavilion was

Moses' successor as Parks Commissioner, Newbold Morris.

With its colossal scale and down-to-earth factual literalness, the Panorama clearly reflected the distinctive tastes of Robert Moses, which were also evident in other attractions at the 1964 World's Fair. It was one of a triumvirate of objects at the fair, each of which, in its own way, was the world's largest example of a particular mode of cartography. Standing next to the New York City Pavilion where the Panorama was housed is the Unisphere, a 140-foot-high, 990,000-pound steel representation of the earth, conceived by a long-time Moses associate, Gilmore Clarke, and constructed by the U.S. Steel Corporation. The

Design for the exterior of the New York City Pavilion, New York World's Fair 1964-65, c.1961. Architect: Daniel Chait (renovation of 1939 building by Aymar Embury II). Rendering: Don Mallow.



Unisphere was the theme symbol of the 1964 fair and the "World's Largest Global Structure." At the nearby New York State Pavilion, Governor Nelson Rockefeller, architect Philip Johnson and the Texaco Oil Corporation arranged for a giant floor mosaic illustrating the New York State road map distributed at Texaco gas stations. Larger than half a football field, the map was—and may still be—the "World's Largest Road Map."

The 1964 World's Fair celebrated the 300th anniversary of the British conquest of the Dutch city of New Amsterdam and the renaming of the city "New York." The displays at the New York City Pavilion were designed to show the progress of three centuries.

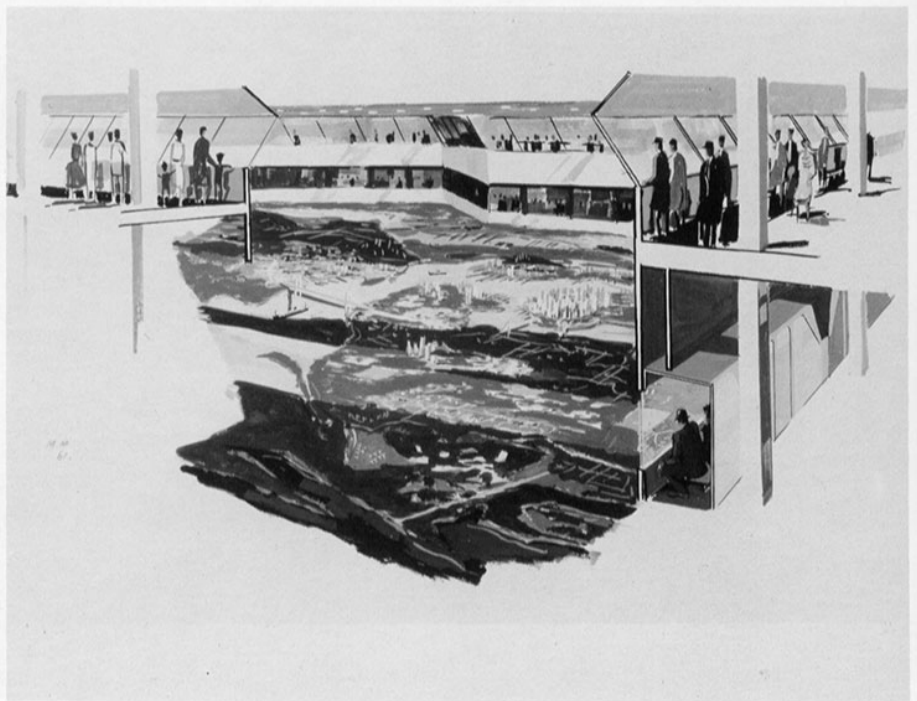


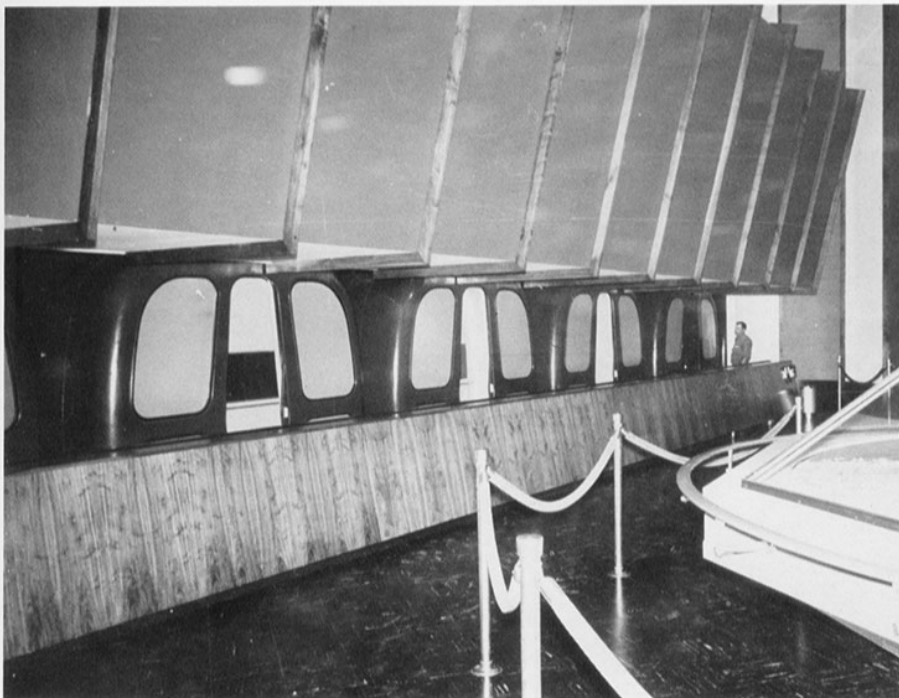
ABOVE:
Giant terrazzo mosaic showing the Texaco road map of New York State, New York State Pavilion, 1964/65 World's Fair, c. 1964. Pavilion architect: Philip Johnson.

LEFT:
The Unisphere, the world's largest global structure, constructed by U.S. Steel as the theme center of the 1964/65 World's Fair, Flushing Meadow Park. Designer: Gilmore Clarke.

Upon entering the lobby, visitors were greeted by New York City Mayor Robert Wagner's audio-address welcoming them to the pavilion and directing them first to a model showing New Amsterdam in 1660. Borrowed from the Museum of the City of New York, the model, made in 1931 by Charles S. Capehart, was refurbished and elaborately encased by Lester Associates.⁶ Visitors then moved on to the Panorama, built at a much smaller scale than the model of New Amsterdam (1:1200 as opposed to 1:300) but dramatically larger. The contrast in size graphically demonstrated the city's growth from a trading post on the tip of Manhattan to a sprawling five-borough metropolis. For 10 cents visitors could take an eight-minute tracked-car ride around the 500-foot perimeter of the giant model. Billed as a "helicopter trip" around the city, the ride simulated views from 3,000 to 20,000 feet. Riders heard an upbeat commentary on "the Greatest City on Earth" read by the famous news commentator Lowell Thomas. The Panorama ride was one of the fair's most successful attractions. Fifty-four continuously running four-seater cars were designed to carry 1,400 people an hour, and there was often a 90-minute wait.

Visitors exited the Panorama ride on the second floor of the New York City Building, and a corridor decorated to look like Times Square at night led them to the glass-enclosed balcony area overlooking the Panorama. Here they could look at the model at leisure, watch it go through its day-to-night lighting cycle, and listen to another Lowell Thomas audiotope celebrating the thriving city. Thomas' monologue explained that the tiny colored lights shining on the Panorama showed the 3,172 municipal facili-





OPPOSITE, ABOVE:
Design for entrance lobby of the New York City Pavilion showing model of New Amsterdam (foreground) and Panorama ride (background), 1961. Architect: Daniel Chait. Exhibition design: Lester Associates.

OPPOSITE, BELOW:
Cross section of the New York City Pavilion showing Panorama model, amusement ride, and viewing balcony, 1961. Architect: Daniel Chait. Exhibition design: Lester Associates.

ABOVE:
Model showing New Amsterdam in 1660 (Scale: 1 to 25). Model: Charles S. Capehart, 1931.

LEFT:
Entrance to the Panorama "Helicopter Ride," in lobby, the New York City Pavilion, c. 1964.



ABOVE:
 Design for the "Museum Showcase" at the New York City Pavilion, 1961. Exhibition design: Lester Associates. Rendering: Don Mallow.

LEFT:
 The Triborough Bridge and Tunnel Authority display at the New York City Pavilion, 1964-65 World's Fair, c. 1964. Exhibition design: Lester Associates.

ties for such basic services as education, protection, recreation and health care.

When viewers tired of the Panorama, they could see other displays at the New York City Pavilion built by Lester Associates. In a large room adjacent to the balcony overlook, a "Museum Showcase" offered a sampling of objects from the city's different museums, historical societies and libraries. As a send-off, an elaborate Triborough Bridge & Tunnel Authority exhibit of models and animated display panels near the ground floor exit celebrated the past achievements of Moses, the TBTA and his plans for the future of New York City.

CONSTRUCTING THE PANORAMA

The creation of the Panorama was a long, difficult and rigorous task. Lester's con-

tract with the city stipulated that the model would later serve as an aid for urban planning, and its design could deviate only minimally from fact. Like the smaller context models Lester had produced for Moses, the Panorama was expected to accurately duplicate the topography of the New York City area landscape, as well as the exact placement and appearance of all man-made structures. The contract allowed for only a 1 percent margin of error. Despite these rigorous requirements the Panorama was finished on time.

Simply gathering and processing the information necessary for the Panorama construction was a daunting task. Lester used specialized city maps designed for tax and insurance purposes which showed the city block by block; these

Lester Associates workers at their jigs handmaking models of New York City buildings for the Panorama, c. 1963.



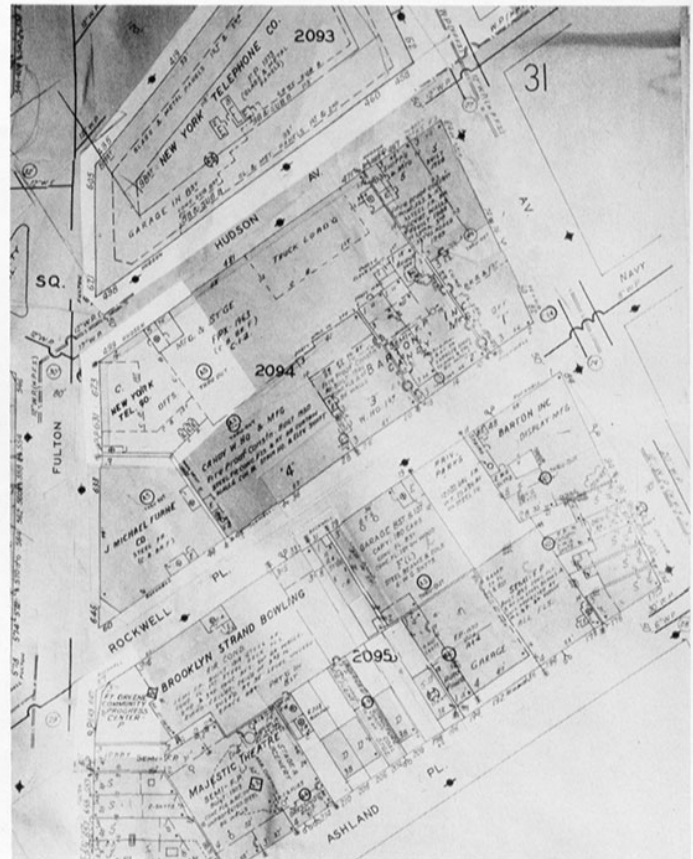
RIGHT:
New York City photographic survey section 11165-4560 showing Flushing Meadow Park (used during construction of the Panorama), c.1962.



BELOW:
Detail of Map No. 26 from Sanborn Map Company, Insurance Maps of the Borough of Brooklyn, volume 2.

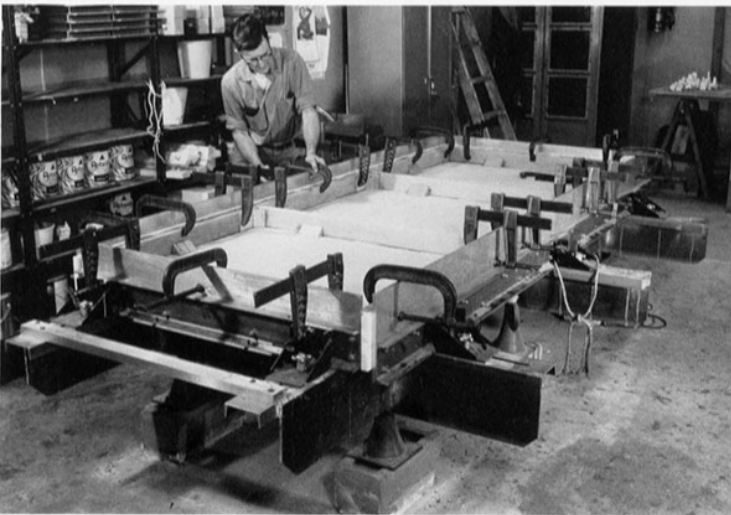
maps included the ground plan of every structure, its height and the materials used.⁷ While these maps laid the groundwork, still other source material was needed to build the Panorama. To verify the city maps and gather information about the distribution of trees and foliage, a complete set of 109 vertical aerial photographs of New York City (shot directly from above) was purchased from the Aero Service Corporation of Philadelphia, Pennsylvania. To portray the building elevations accurately, 5,000 oblique aerial photographs (shot at an angle) were commissioned from Aero Service, and pictures of individual structures were diligently gathered from libraries and public agencies. A set of 19 contour maps produced by the U.S. Geological Survey was used to record the topography of New York; and Sanborn Map Co.'s set of 35 maps, *Sectional Map of New York City Showing City Owned & Operated Facilities*, was used to determine the location of municipal services.

The 9,335-square-foot surface of the





ABOVE:
*Worker with the set of vertical
aerial photographs used for the
construction of the Panorama of
New York City, c. 1963.*



LEFT:
*Worker constructing the bottom
supports of one of the Panorama's
273 sections, 1963.*

Panorama was constructed at Lester's Westchester workshop in 273 separate sections. The 186 central sections are rectangular modules, each measuring 4 by 10 feet, while the ones near the edge of the model have been cut according to need. The sections are made of Formica flakeboard topped by urethane foam slabs, a newly introduced, malleable material easy to cut and paint. The model-makers' first task was to duplicate the topography of the metropolitan New York region, using the geological survey maps as a source. The shorelines and

contour elevations of the city were traced onto the different sections, then the urethane foam surface was routed and sanded accordingly. Although Lester adhered closely to the information provided by the survey maps, this was one moment in the model-making process when he took liberties with the Panorama's 1 inch to 100 foot scale, choosing deliberately to exaggerate the relatively flat elevations so significant topographic features would be more visible.

The next stage of the process involved tracing the city's streets, high-



Worker sanding elevation contour on the Panorama, 1963.

**VIEWS OF
THE PANORAMA**



ABOVE:
*The Bronx, looking south toward
Manhattan and Queens.*

RIGHT:
*Queens, looking northwest, with
Kennedy Airport in foreground.
The balcony overlook is visible
in the background.*

CENTERFOLD:
*Lower Manhattan, with Battery
Park and the World Trade Center
in the foreground, looking
northeast.*

Photos © Dan Cornish/Esto.







Photo © Dan Cornish/Esto



ABOVE:
*Brooklyn, looking northeast,
with the Verrazano Narrows
Bridge in foreground.*

LEFT:
*Staten Island, looking
northeast toward Brooklyn.*

Photos © Dan Cornish/Esto

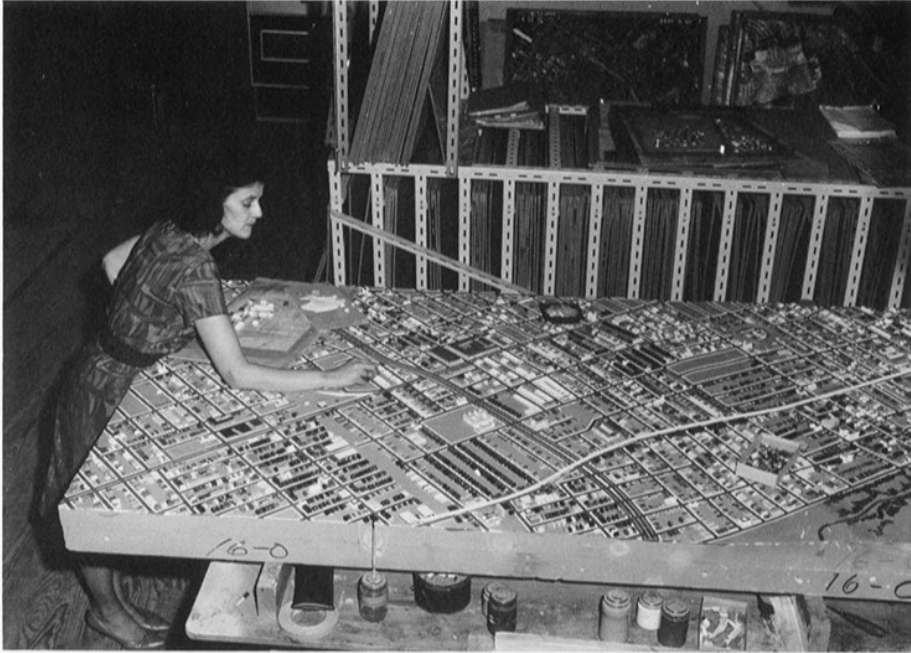
Worker applying masking tape guides before painting the roadways on the Panorama, 1963.



ways, sidewalks, blocks, and parks onto the Panorama sections using the map books of G.W. Bromley and the Sanborn Map Company. Although most of the maps in these books use the same 1 inch to 100 foot scale as the Panorama, scale sometimes varied, and photostated copies were needed before the paper templates used for basic tracing could be made. The model was painted according to a strict color code: local roads—dark gray; highways and parkways—light tan; city blocks—off-white; urban blocks—light green; parks—dark green; and sec-

tions outside the city limits—black.

Next came the task of forming, then gluing down the model's over 800,000 miniature buildings. The vast majority of the city's structures were represented with standardized model units Lester carefully designed then molded out of plastic. Most of the buildings on the Panorama are one- and two-story homes and small industrial buildings, which were depicted from an assortment of 150 differently shaped and sized units. Brownstones, tenements, and four- or five-floor apartments were represented



ABOVE:
*Worker placing building models
on a section of the Panorama,
1963.*



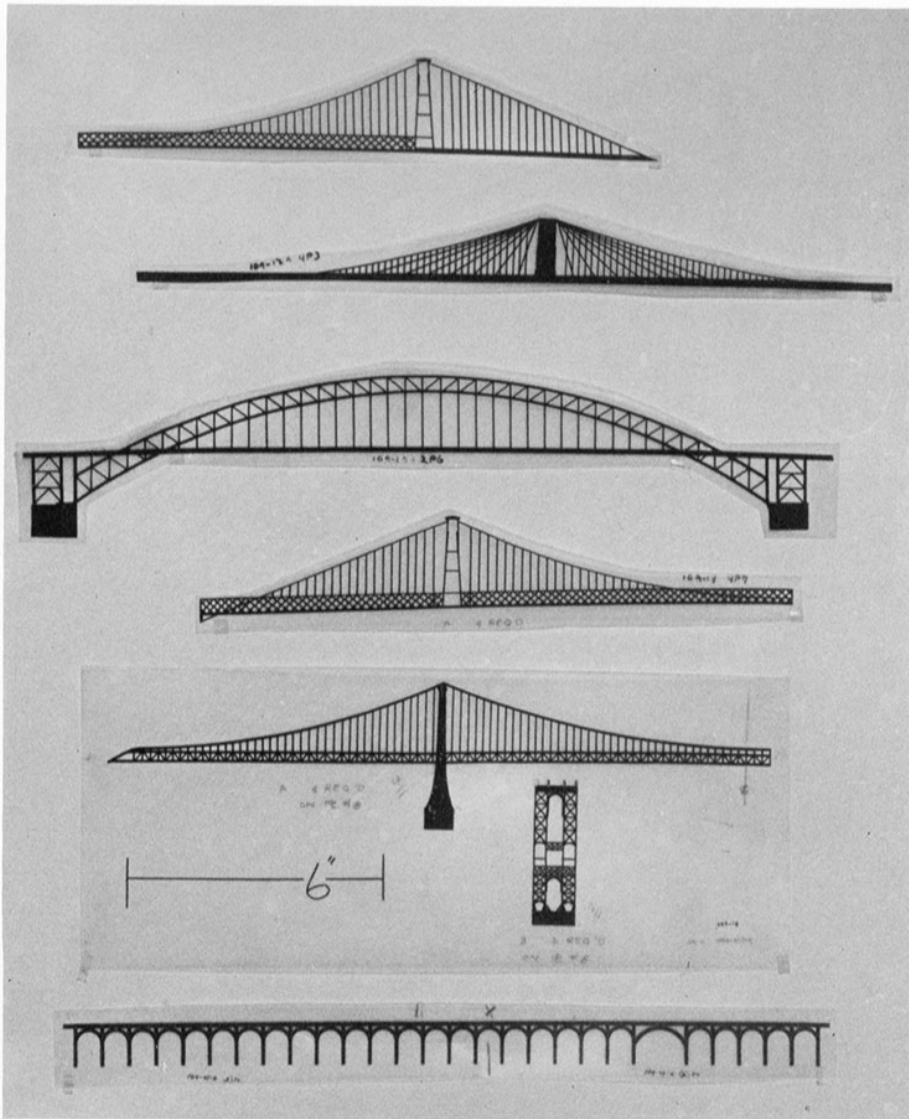
LEFT:
*Worker touching up building
models before placing them on the
Panorama. Models are placed on
pages taken from land books
produced by the Sanborn Map Co.
In background, a selection of
standardized units used to form
model buildings.*

with another 40 different unit styles. Other standardized units were created for single-steepled churches, double-steepled churches, and an assortment of water tower designs. One hundred thousand large, but basically geometric, buildings were handmade by combining 24 standardized shapes in varying ways. Finally 25,000 special New York City buildings—skyscrapers, large factories, colleges, hospitals, museums, major

churches and other notable landmarks—were custom-made to closely approximate their individual shapes. At a scale of 1" to 100', however, there isn't much room for detail. The Empire State Building, the largest building in New York at the time the Panorama was constructed, measures only 15 inches. Lester makes no attempt to accurately portray windows, relying instead on standardized stencils.

The Lester Associates model shop in Thornwood, N.Y., during the construction of the Panorama, c. 1963.





ABOVE:
Ink drawings used in the construction of the bridges on the Panorama (top to bottom: Williamsburg Bridge, Brooklyn Bridge, Bayonne Bridge, Williamsburg Bridge, Manhattan Bridge, Triborough Bridge Approachway), c. 1963.

OPPOSITE:
Models of Triborough Bridge and Hell Gate Bridge on the Panorama (scale: 1" to 100'), constructed 1961-64.

By far the most accurate and finely made structures on the Panorama are its 35 major bridges. While most of the Panorama's buildings are made of wood and plastic, the bridges are constructed out of brass shaped by a unique chemical milling process. Using the original blueprints of the bridges, Lester made detailed line drawings of their different sections. These drawings were then photographically exposed onto sheets of metal which were dipped in chemicals that dissolved the unexposed areas. Once the sections were assembled, the bridge models accurately reproduced the metal structure and cables of the originals.⁸

One difficult facet of the construction of the Panorama involved the identification of city buildings by colored lights. Using facilities lists gathered from the major city departments as well as a set of Sanborn's city facility maps, Lester identified 3,172 city-owned structures. Tiny light bulbs were placed beneath the Panorama (where they could easily be changed), and a primitive form of fiber optics sent the glow of these lights to the surface of the model along translucent colored plastic wire inserted in the appropriate spots. Different colors identified the services provided by each city facility, but the number of services far exceeded the available colors.

Five distinct light cycles were created, each related to a different group of services. This was all explained in the Lowell Thomas audiotape playing in the balcony overlook. The five cycles were: *Protection*: red—Fire Department; blue—Police Department; green—Traffic Department; yellow—Department of Correction; white—New York City Courts. *Education*: red—public libraries; blue—elementary schools; green—museums &

historical institutions; yellow—high schools; white—colleges. *Health*: red—water, gas and electric; blue—additional city services; green—Department of Health; yellow—Department of Sanitation; white—Department of Hospitals. *Recreation*: red—recreation buildings; blue—golf courses; green—parks; yellow—beaches; white—playgrounds. *Commerce, Welfare and Transportation*: red—Department of Transportation; blue—Department of Welfare; green—Housing Authority; yellow—Department of Marine & Aviation; white—city office structures.⁹

Overhead, the lights which illuminate the Panorama are designed to run

in a cycle which simulates a dawn to dusk effect. The nighttime effect is enhanced through ultraviolet paints illuminated by blacklight. All the windows of the larger buildings are stenciled with this phosphorescent paint and glow in the dark. In 1964, this was a modern, effective and relatively easy way to reproduce the city lights at night. Ultraviolet paint, however, has a limited life span and 25 years later its luminosity has dimmed considerably, so the Panorama's night cycle is not nearly as effective as it once was. A solution is now being sought.

When all the sections of the Panorama were completed at Lester's work-

shop they were taken to the New York City Building. Each section was supported on adjustable metal legs and bolted to the adjoining ones. The touch-up process involved taping, puttying and painting to seal the joints between each of the sections.

Except for one hitch the installation went smoothly. Because of the presence of structural supports in the New York City Building, the space allotted for the model and amusement ride was a bit too small. Although most people don't notice, one of the 273 sections—showing a part of Far Rockaway—was never installed, making the Panorama slightly less than the entire city.



PANORAMA PRECEDENTS

While the Panorama is a unique object which can be clearly linked to the ambitious construction career of Robert Moses, it also fits comfortably into a tradition of world's fair model-making. World's fairs seek to illustrate the whole range of human achievement, and models have provided a convenient way to show projects that are too big to be transported to a fair site. The guidebook for the first world's fair, held in London in 1851, lists numerous models of ships, bridges and buildings, as well as a large model of the proposed Suez Canal. One direct ancestor of the Panorama was to be found at the San Francisco World's Fair of 1915. Here New York City—the only city with its own pavilion—exhibited a 550-square-foot model showing New York City in complete detail, and included a lighting system that illuminated harbor channels and prominent buildings.

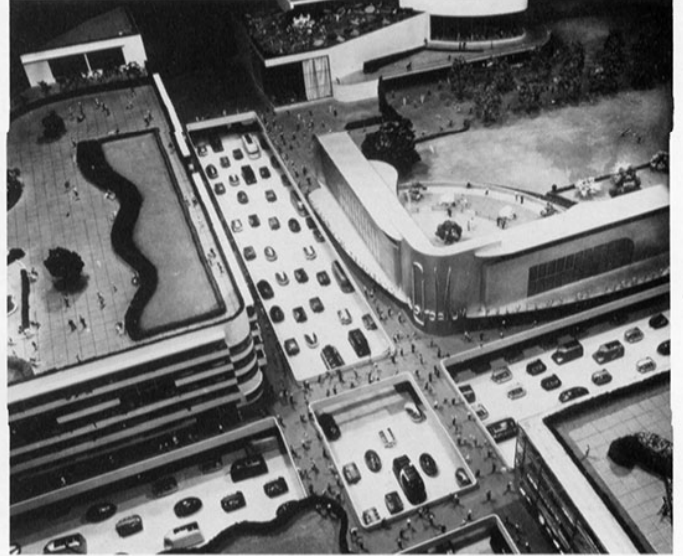
Model displays reached particularly elaborate heights at the New York World's Fair of 1939/40. The most popular feature at the Fair was the giant Futurama model that Norman Bel Geddes designed for the General Motors Pavilion. Projecting 20 years into the future, the model illustrated how America would look in 1960. Larger than the Panorama, the Futurama incorporated 35,000 square feet; and its construction involved many of the same technical problems that Lester would later face. Like the Panorama, the Futurama was constructed off-site in separate sections that were then assembled together. The modelmakers for both used U.S. Geological Survey Maps for source material, and the same paper template technique to transfer information onto their models. In both instances, standardized units



formed buildings and other structures. Another parallel between the Futurama and the Panorama was the spectator ride, in the earlier exhibit billed as an "airplane" trip and in the later as a "helicopter" tour. Instead of the Panorama's tracked cars, the Futurama used a row of moving chairs, each wired for sound,

that traveled along the model's edge. Bel Geddes achieved sophisticated effects using changes in the scale of the model (from 1:1200 to 1:600) to simulate an airplane flying high, and then descending for a close-up look.

Another huge model at the 1939 World's Fair presaging the Panorama was



OPPOSITE:
Norman Bel Geddes (upper left) standing with some of the 408 sections of his Futurama model under construction for General Motors Pavilion at the 1939 World's Fair, c.1938.

ABOVE, LEFT:
Visitors view the Futurama from moving seats at the General Motors Pavilion, 1939 World's Fair, c. 1939.

ABOVE, RIGHT
The City of Tomorrow from the Futurama model, c. 1939.

LEFT:
Highways and bridges of tomorrow from the Futurama model, c. 1939.



the City of Light, a huge diorama designed by Walter Dorwin Teague and built by the Diorama Corporation of America for the Consolidated Edison Pavilion. (A diorama is an exhibit with partially molded units silhouetted against a painted background. In contrast a panorama is usually totally three dimensional with unobstructed views in all directions.) The City of Light was a block-long contraction of New York with over 4,000 recognizable buildings from Brooklyn to Westchester. While the foreground buildings were done fully in the round, low relief was used for the background structures in front of the painted backdrop. The tallest building, the Empire State Building, measured 29 feet. The display was sponsored by Consolidated Edison Company of New York,

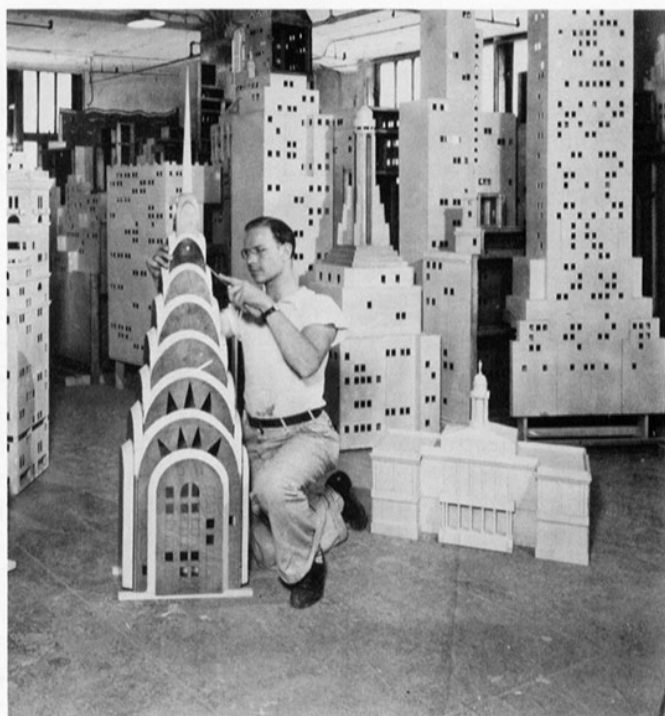
Inc., the city's principal electric utility. It featured a moving version of the electrically powered subway and elaborate lighting effects, which, like the Panorama, included a day-to-night cycle.

The brochure for the Futurama boasted that it was "the world's largest model," while the City of Light billed itself as "the world's largest diorama." Such grandiose titles were often claimed by world's fair attractions as they sought to enhance their allure in a competitive midway atmosphere. Since the Futurama was destroyed soon after the 1939/40 Fair closed, 25 years later the Panorama (which is only about one quarter the size attributed to the Futurama) could claim that it was the world's largest scale model. Large scale models, however, are not listed in *The Guinness Book of World*

OPPOSITE:
The City of Light diorama, showing day and night cycles, Consolidated Edison Pavilion, 1939 World's Fair, 1939. Exhibition design: Walter Dorwin Teague; constructed by the Diorama Corporation of America.

BELOW, LEFT:
Workers installing the Chrysler Building and the Empire State Building on the City of Light.

BELOW, RIGHT:
Constructing the top of the Chrysler Building for The City of Light.





The miniature village of Madurodam, the Hague, the Netherlands, a collection of 129 miniature buildings (scale 1:25) occupying a 50,000-square-foot site, constructed 1952.

Records, and clearly there are different definitions. The most serious challenger to the Panorama's claim is the miniature town of Madurodam built on an over 50,000-square-foot outdoor site near the city of the Hague, the Netherlands. Begun in 1952 to raise money for a local hospital, Madurodam includes representations of the best-known buildings in Holland.¹⁰

While the Panorama is a single model of a municipality, Madurodam is more a collection of separate models. They are much larger, constructed at a scale of 1:25 (as opposed to the Panorama's 1:1200). So while the Dutch model takes up more room than the Panorama, it has far fewer buildings—only 129 as opposed to the over 865,000 now on the Panorama.

AFTER THE FAIR

While it was understood the giant models of the 1939 World's Fair would be destroyed when the fair closed, the July 1961 construction contract for the Panorama specifically stated, "the complete model shall be designed as a comprehensive planning and study device for use after the closing of the World's Fair." It was built so it could be easily dismantled. At first there was talk of putting the giant model in the new civic center then being contemplated for Manhattan, and, later, plans to place it in the lobby of the World Trade Center, but neither site worked out. The Panorama remained at the New York City Building where it was periodically used by Moses and others for regional planning. When Flushing Meadow reopened

as a public park in 1967, the model and its "helicopter" ride were once again opened to the public. Although the Panorama was technically under the auspices of the New York City Planning Commission, it was the Triborough Bridge & Tunnel Authority that paid for its maintenance.

With the retirement of Moses in the early 1970s, however, TBTA's interest in the model faded. When The Queens Museum was founded in 1972 and housed in the New York City Building, the model came under its supervision. With this change in management the function of the model underwent a transformation. The Panorama's role has changed as the exhibit has been integrated into the aesthetic and educational mission of a fine arts museum.



Janet Schneider, former executive director of The Queens Museum, and representatives from Gerald Hines Interests place a model of Philip Johnson's oval 53rd and Third building on the Panorama, 1987.

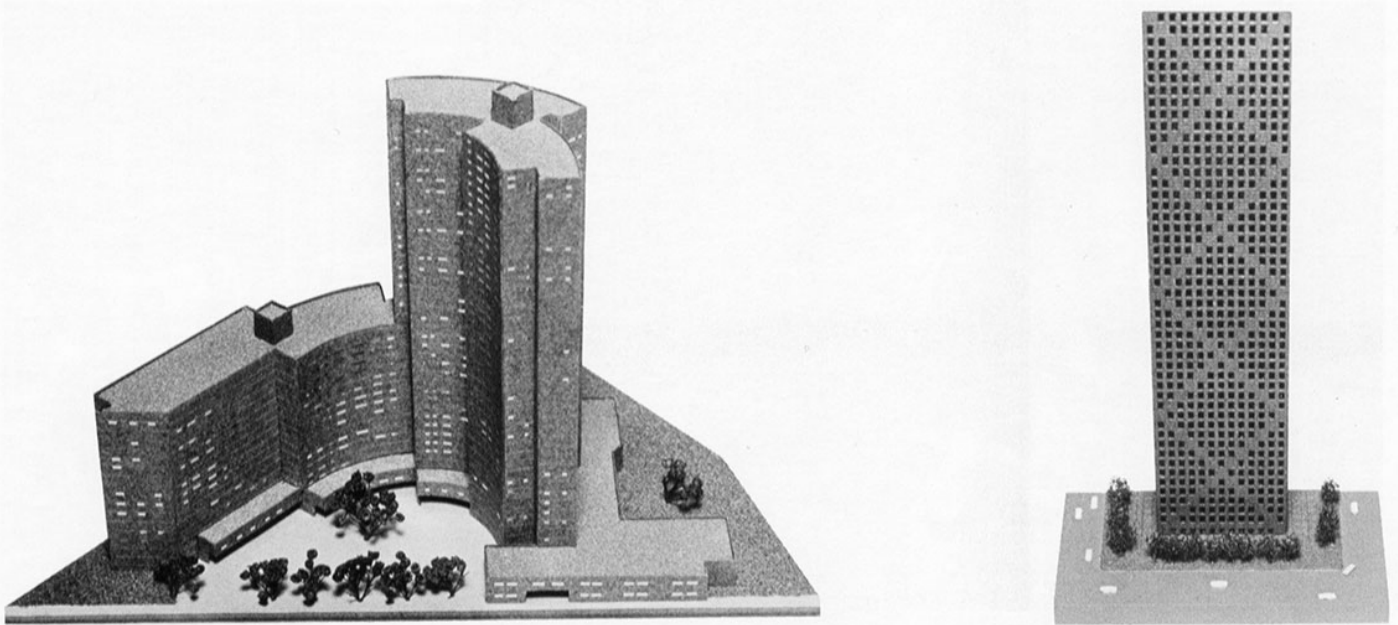
KEEPING THE PANORAMA UP TO DATE

Inherent in its conception as a permanent planning tool and educational device was the intent to keep the Panorama current with the city's constant changes. When the model was built in the early 1960s, Moses and Lester, in fact, projected ahead so the model would be up to date when the fair opened. The Van Wyck Expressway extension and the Verrazano Narrows Bridge, both still under construction, as well as some future highways contemplated for Staten Island appear as finished products.¹¹ Lester designed the model so that buildings could be easily removed, and roads and highways reworked without excessive cost. Between 1967 and 1969, Lester provided yearly updates, basing his

changes primarily on information the Sanborn Map Company regularly provides to subscribers of its Land Books.¹² In 1974 following the founding of The Queens Museum, Lester provided another update for the Panorama; this time the work was paid for by the city, not the TBTA.

The Queens Museum strives to keep the Panorama up to date so it can best fulfill its educational functions. Unfortunately funds have been scarce. Since the update in 1974, changes on the Panorama have been sporadic, dependent entirely on voluntary donations of models from real estate developers and architects. During the late 1970s there were relatively few major changes in the city, but the 1980s have seen a burst of building activity. Many of the newest

projects have high visibility. These buildings with their distinctive architecture occupy conspicuous spots on the ever-changing shoreline of Manhattan, and on the downtown and midtown skyline. Civic-minded and promotion-conscious corporations, private developers and architects like Citicorp, IBM, AT & T, Marriott Hotel, Emery Roth & Sons, Skidmore Owings & Merrill, Swanke Hayden & Connell, and Fox & Fowle are just some of those who have contributed models for the Panorama. Increasingly, however, the Panorama has become out-of-date. New public construction, the dismantling of the West Side Highway and the Hudson River piers, the deterioration of the South Bronx, and the construction of scores of smaller structures have gone unrecorded. The Panorama



ABOVE, LEFT:
Model of Confucius Plaza
 (scale: 1" to 100') donated for
 the Panorama by Previews
 Custom Architectural Models
 and Prototypes, Easton, Pa., 1988.
 Architect: Horowitz & Chung.

ABOVE, RIGHT:
Model of the Wang Building
 (scale: 1" to 100') donated for
 the Panorama by Skidmore,
 Owings, & Merrill, 1988.

RIGHT:
Photograph showing a model
of Donald Trump's proposed
Television City temporarily
placed on the Panorama by
the community group
People for Westpride, 1987.





Plastic model of Robert Moses' proposed Mid-Manhattan Expressway temporarily installed on the Panorama, c. 1966.

has become a strange pastiche—a picture of New York suspended between the 1970s and 1980s.¹³

USES OF THE PANORAMA

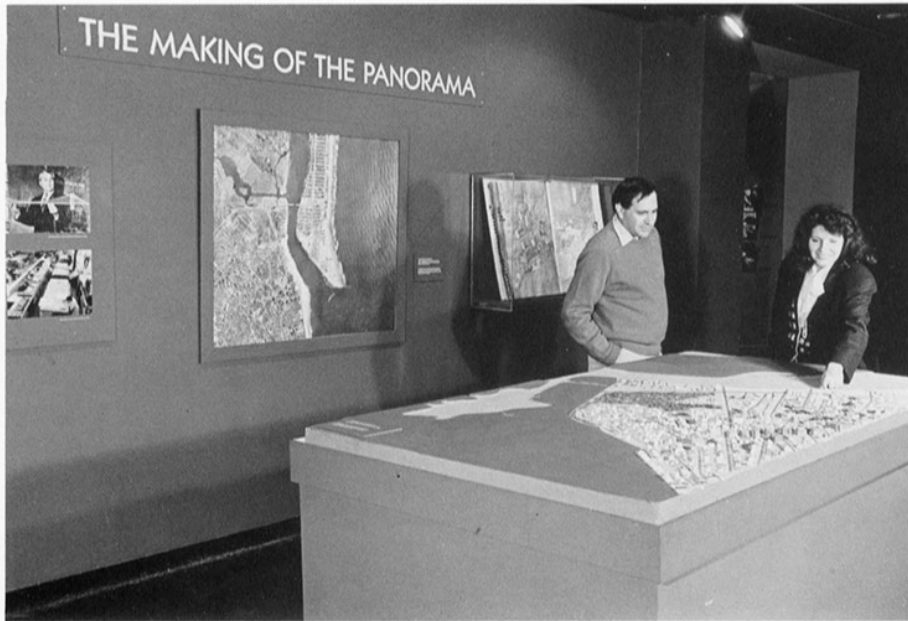
In addition to its function as a world's fair attraction, Moses conceived of the Panorama as an urban planning tool. Its vast, five-borough expanse is most useful for the type of broad regional planning that he specialized in. Starting in the early 1920s, Moses had envisioned changes in the city brought about by the advent of the automobile which at that time had only recently replaced the horse and buggy. Moses' long career involved him in the construction of numerous roads and bridges to facilitate the flow of traffic through the metropolitan New York area. Each road was a part of an integrated roadway system that could clearly be seen on the Panorama. After the 1964/65 Fair closed, Moses used

the Panorama as a planning tool by illustrating on it proposed changes in his highway system. One photograph shows a plastic unit tracing the route of the proposed Mid-Manhattan Expressway, a never-to-be-built road project connecting Manhattan's east side Midtown Tunnel with the west side Lincoln Tunnel for an easy link between New Jersey and Queens.

Moses believed the Panorama was useful for determining the location of future housing, routes for future highway construction, sight lines for television and radio transmission, traffic pattern studies, locating new firehouses and schools, and even for the police work of plotting motorcade routes and protecting overlooks. In fact Moses, who was in his seventies when the Panorama was built, used the model infrequently. His creation became less a planning tool for his future projects than a celebration and

commemoration of his past achievements. In every section of the Panorama, Moses' ambitious projects are not only seen but are in odd ways emphasized. The bridges, seven of which Moses had constructed, are the only elements of the Panorama fabricated in metal. Parks, another of Moses' interests, are emphasized by the unique device of painting them in an ultra-violet green so they glow during the night cycle.

In the 1970s and 1980s, interest in the broad regional planning that Moses specialized in has declined. Such broad thinking has become temporarily unnecessary, in part because of Moses' successes during his fifty-year career in constructing most of the elements of his regional master plan. Simultaneously the disruption caused by Moses' large-scale building projects raised new planning concerns involving the impact of new buildings on a neighborhood level. Most



Installation view of the "Making of the Panorama" exhibition at The Queens Museum. Curator Marc Miller and Donna Tuman, former curator of education, examine the never-installed Far Rockaway section of the Panorama, 1987.

architectural planning today involves single buildings and their impact on limited areas. The broad geographical scope of the Panorama is too big, while the size of individual buildings is too small to serve these types of projects. One recent exception, however, involved Donald Trump's proposed Television City, a complex of buildings to include the world's tallest skyscraper. The community group People for Westpride temporarily installed a cardboard model of the proposed Television City on the Panorama to demonstrate the impact of the project on Manhattan's West Side. Even on the expansive Panorama, the gargantuan scale of Television City was evident.¹⁴

As a planning tool, the 25-year-old Panorama is in some ways primitive when compared to the capabilities of today's modern systems. The Environmental Simulation Laboratory (ESL) at

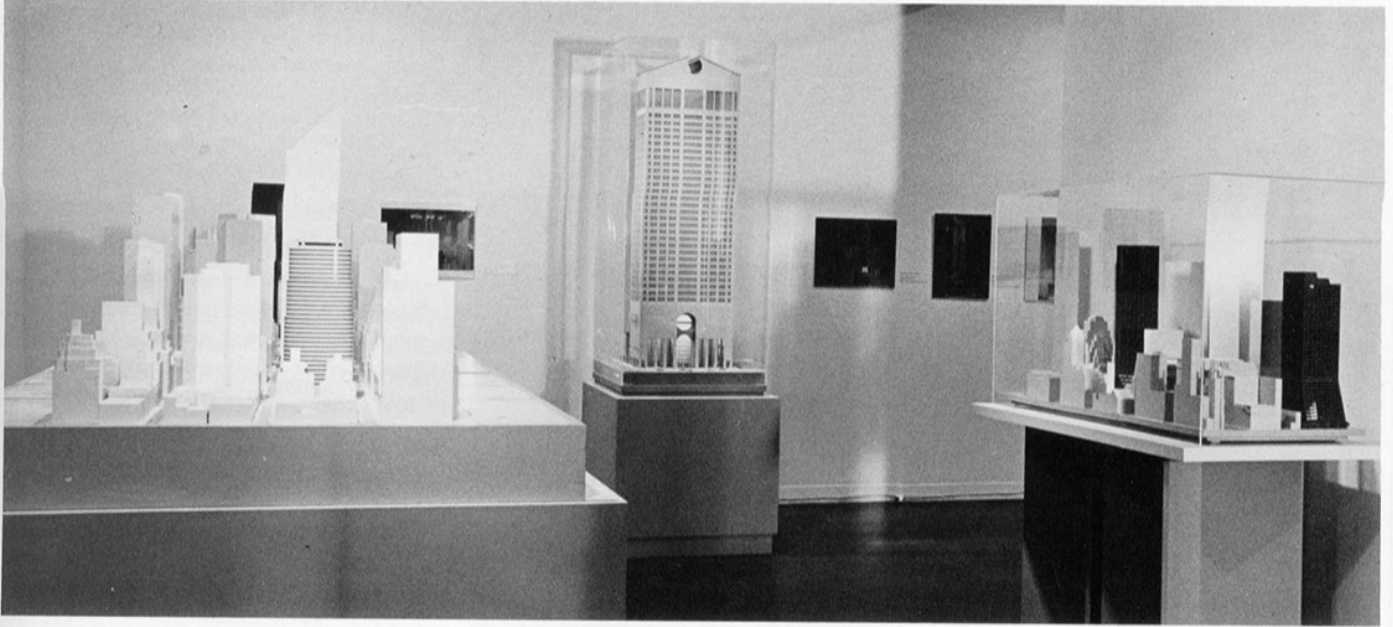
the University of California at Berkeley, under director Peter Bosselmann, has made technological strides in constructing models of San Francisco and other urban areas. One ESL device is a computer-controlled miniature camera system that moves along the streets of their models to make films that accurately simulate street level views. Lighting systems duplicate the movement of the sun at all times of the year, showing clearly the shadows new buildings will cast. ESL also built a wind tunnel for models to test how new buildings will affect wind currents.¹⁵

Three-dimensional computer aided design (CAD) systems are increasingly replacing three-dimensional scale models as urban planning aids. The architectural firm Skidmore Owings & Merrill, for example, has recorded into its computers the designs of all the buildings in downtown and midtown Manhattan.

Computer operators have complete control over the image shown. They can change the observer's on-screen view from close-up, street-level perspectives to distant aerial views. A walk down a street is easily simulated and, if the proper information has been fed into the computer, you can even enter into buildings! The models generated on computer screens can also measure shadow effects. New information is easily incorporated into computer models and their image printouts facilitate the study and exchange of information.

THE PANORAMA: A TOOL FOR EDUCATION

Miniature models seem to have an inherent fascination for people and because of this they work well as an educational tool and public relations device. When the city constructed the Panorama as its World's Fair exhibit, it saw the model as



a giant advertisement for "the greatest city on earth." At the 1939 Fair, the New York City Pavilion's exhibit of photographs and documents illustrating different municipal services and facilities was a dull affair ignored by almost everyone. In contrast the city's presentation of similar information at the 1964 Fair using an audiotape linked to blinking lights on the Panorama was an instant attention grabber. In subsequent years the city has continued to use the model for public relations purposes. A photograph of an attractive lady sweeping the Panorama with a broom was used for a "Keep New York Clean" campaign. New York City Mayor Edward I. Koch used the Panorama to trace the route of the New York marathon in a television promotion.

Now as an attraction at The Queens Museum, the Panorama continues to help people better understand the metropolis and define their relationship to

it. Mapping systems that translate three-dimensional information into two dimensions can be difficult to understand. Three-dimensional models, however, can be understood by virtually anyone. The miniature city has a striking clarity that inherently leads to new insights and observations. Panorama visitors learn as they marvel at the complex city.

The model is especially useful for children, and the New York City Board of Education has incorporated it into its curriculum. During the 1988/89 school year, over 26,000 elementary and high school students from all sections of New York visited The Queens Museum to see the Panorama. Most children know only limited sections of the city and their understanding of the whole is often disjointed since they usually travel from one part to another by subway. The model gives these children a better understanding of their environment, teach-

Installation view of the exhibition "New New York" at the Queens Museum. Left to right: David Gibson's 53rd Street context model spotlighting Philip Johnson's 53rd and Third Avenue Building; model of Johnson's AT&T Building by Awad Architectural Models; Midtown context model spotlighting Trump Tower constructed by Juan Bustamante of Swanke Hayden Connell Architects, 1987.

ing them about the harbor of New York and the five boroughs of the city. The Museum has developed "City Safari," a sound and light show for school groups that leads them about the model city highlighting new and interesting places they can visit.¹⁶

As a part of The Queens Museum, the Panorama is used as a component of exhibitions and education programs geared to elucidate the history and urban development of New York City. Since the mid-1980s the space around the Panorama has been used for exhibitions that have focused on different aspects of the city. In 1987 The Queens Museum mounted *New New York*, an exhibition of architectural models showing new projects from the last decade. This exhibition was designed not only to give insight into the changes taking place in the city but to also show the current state of the art of architectural model-making. As one of the few surviving major attractions from the 1964/65 World's Fair, the Panorama has also formed an important part of the Museum's World's Fair programming. Other institutions also use the Panorama. The Municipal Art Society sponsored a visit to the Panorama as part of a program studying the impact of Moses on the city.

TOMORROW'S PANORAMA

Now celebrating its 25th birthday, the Panorama is slated for a complete rehabilitation as it enters a new phase of its history. Under a plan conceived by Rafael Viñoly Architects, viewer access to the Panorama will be improved with construction of an ascending ramp with glass platforms overlooking the model. The old "helicopter" amusement ride, unavailable for public use since the early

1970s will be removed. While currently the Panorama is lit only from the sides, the new design will include an overhead grid with spotlights to illuminate individual features of the model. One report under study suggests linking these spotlights to interactive video displays so the viewer can select a landmark site, see it lit on the Panorama, and watch a video program on its history and significance. With money promised by the city and the Office of the Queens Borough President, the Panorama will be cleaned and once again completely updated. The Queens Museum is currently establishing the Panorama Endowment Fund to assure future yearly updates and other improvements.

The Panorama is a unique one-of-a-kind object with a distinctive history and mission. While the Panorama would undoubtedly have been of interest merely as a record of how New York City looked in the 1960s, it achieves a greater value by fulfilling the intentions of its creator, Robert Moses, to keep the model up-to-date with the present city. For us at The Queens Museum, the Panorama presents a special challenge—it is a living exhibit that we must continue to change at a pace as dynamic as New York City itself. ■

FOOTNOTES

1. Taking into account inflation, it would cost close to \$3 million to build the Panorama today.

2. Robert A. Caro, *The Power Broker; Robert Moses and the Fall of New York*, Vintage Books, New York, 1975.

3. "Modelmaking General: Raymond A. Lester, President of Lester Associates, Is One Man Who Turned a Boyhood Hobby Into A Million Dollar Business," *Industrial Models & Patterns*, November-December 1964, pp. 10-13.

4. At the New York State Pavilion, Lester constructed a display for the New York State Power Authority which was then headed by Moses. The exhibit showed the St. Lawrence River Power Project and was dominated by a huge mechanical model of the Robert Moses-Robert Saunders Dam at Messena, N.Y., and a large diorama of the Power Plant at Niagara, N.Y. After the fair closed the models were installed in the visitor centers at the two sites. The Niagara Power Plant diorama remains on display there.

5. Lester's large fair model eventually included over 175 pavilions. After the fair opened it was moved to the American Express Pavilion, near a main entrance, where it served as an orientation aid for fair visitors and an attraction in its own right. Although individual pavilion models survive, the model as a whole was destroyed.

6. The model of New Amsterdam is called the Castello Model after the maker of a 1660 plan of the settlement. The model is still on display at the Museum of the City of New York.

7. The map books consulted by Lester Associates included G.W. Bromley & Co.'s *Land Book Manhattan* (one volume) and *Land Book Bronx*, (four volumes), and Sanborn Map Co.'s *Fire Insurance Maps Richmond* (four volumes) and *Fire Insurance Maps—Queens and*

umes) and *Fire Insurance Maps—Queens and Brooklyn* (44 volumes).

8. This chemical milling process, similar to etching, gave Lester the potential to make multiple copies of the model bridges. Second copies were made of the seven bridges run by the TBTA and these were incorporated into that agency's fair display at the New York City Pavilion. After the fair closed this second set of bridge models hung in Moses' office at TBTA headquarters on Randall's Island. They are now on long-term loan to The Queens Museum.

9. In recent years the five-cycle lighting system was abandoned and today all the lights on the Panorama shine simultaneously.

10. *Madurodam*, exhibition guidebook, the Hague, the Netherlands, n.d.

11. The Staten Island Expressway was in fact never constructed in its entirety and deviates considerably from the way it appears on the Panorama.

12. In the early 1970s, the Sanborn Map Company took over G.W. Bromley & Co. and became the sole producer of New York City Land Books. Like the Panorama, these books are designed to stay current with the changing city and each year new additions are mailed to subscribers who paste them into the appropriate spots.

13. One side effect of the piecemeal fashion in which the Panorama is being updated is a breakdown in the uniformity of the model's look. While some of the new buildings are still made by Lester Associates (the firm continues to operate even after the death of Raymond Lester in 1983), most are by other modelmakers using different materials and techniques.

14. The Queens Museum encourages legitimate use of the Panorama for planning purposes and welcomes proposals.

15. Peter Bosselmann, "The Berkeley



Environmental Simulation Laboratory: A 12 Year Anniversary," *Berkeley Planning Journal*, 1984, pp. 150-157.

16. The Queens Museum is currently producing a "City Safari" board game which will be distributed to elementary school groups in conjunction with their visit to the Panorama. Players learn about the resources of the city as they seek the quickest route between sites in the five boroughs.

Photograph taken on the Panorama for an "I Love a Clean New York" advertisement, c. 1970.

THE CITY OF OPPORTUNITY

Narration script for "helicopter ride" around the Panorama written by Harvey Yale Gross for Lester Associates and read by Lowell Thomas.

Hi there,
This is Lowell Thomas
Welcome aboard—
Just step right in—be
seated—
that's right, come in—
make yourself comfortable—
just step aboard, sit back
and relax—
and now,

Let's get ready for take-off
For a flight into the past
and present,
of the greatest city
on earth—!
For it really is.

Let's sail with the early explorers
Sail into the harbor
with Verrazano,
the place marked by that bridge,
world's longest suspension span,
connecting Staten Island
with Brooklyn—

This is Staten Island,
named by Henry Hudson,
later known
as the borough of Richmond—
Third largest, most rural,
and least developed—

Against a deadline set
by the Duke of York,
Capt. Christopher Billopp
raced his sailing ship
around this island
in less than one day,
and thereby won Staten Island
for the State of New York—

It was here
At the very house Billopp built,
that on September 11, 1776—
Benjamin Franklin and John Adams—
Met with British General Howe
in an attempt
to peacefully settle
the American Revolution—

Staten Island—
where Jenny Lind, Adelina Patti
and the great Italian Emancipator
Giuseppe Garibaldi,
each made his home—

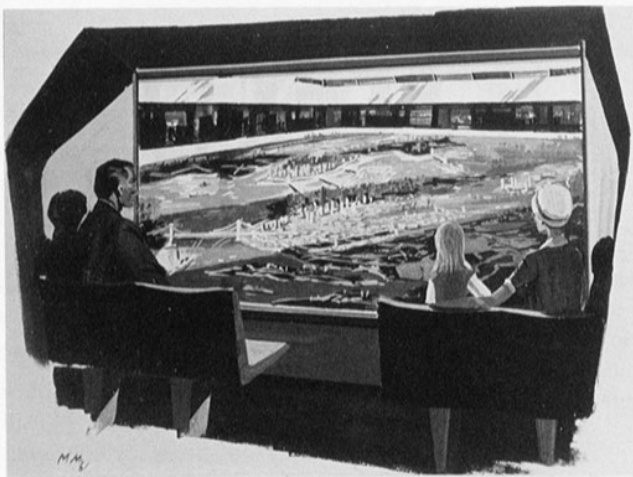
Where you can find
the oldest elementary school building
in America—
Where you can climb
to the highest point
on the Atlantic Coast—
from Maine to Florida—
Todt Hill—
and here,
just below you,
the Goethals Bridge to Jersey—
once the world's
longest suspension—

From its growing industrial area,
manufactured goods
move by ship
along miles of docks
or by truck
across the Bayonne Bridge,
the longest arch in the world—

Now glance across the Harbor:
the borough of homes and churches—
of more than 2-1/2 million people—
That's Brooklyn—

Everyone has lived here,
from Henry Ward Beecher
to Mae West,
from Walt Whitman
to Arthur Miller and to
Eamon de Valera—

From its terminals and waterfront,
1/4 of all New York's goods
are shipped—



Visitors to the Panorama listened to Lowell Thomas' narration about New York during a "simulated helicopter ride" around the model's edge.

Recognize the lady below—?
Oh, yes—
She's France's gift to the U.S.A.
Miss Liberty—
Gateway to America—
to opportunity—
to New York—!

From Indian trading post
300 years ago,
to financial capital
of the world!

In 1789—
A young nation's first capital,
As George Washington is
inaugurated—

And an Indian trail,
Broadway,
carried the City north—
past the 102 floors
of the Empire State Building,
past more than 100 skyscrapers
over 30 stories tall—
past the 840 green acres
of Central Park—

Past Columbia University,
New York's oldest college—
Past a former district
of quiet farms
called Harlem—

Past the stunning George Washington
Bridge—
fourth longest suspension
span in the world—

To the art treasures
of the Cloisters—
Manhattan:
12-1/2 miles
of incredible achievement—

Quite a bargain
for only \$24—!

Cross Spuyten Duyvil—
and you land in the Bronx—
only borough on the mainland—
And how much did the Bronx cost—?
Well, its first settler
Jonas Bronck, a Dane,
bought it from the Indians
for 2 guns, 2 kettles,
a barrel of cider,
and 6 bits of money—
Little did they realize
that the Bronx one day would wind up
with the New York Yankees—!

The Bronx—
whose Gouverneur Morris
first drafted the Constitution
of the United States—
Where Edgar Allen Poe
wrote *The Raven* and
Annabelle Lee—
whose Woodlawn Cemetery
is the last resting place
of Admiral Farragut, Ralph Pulitzer,
Jay Gould and F.W. Woolworth,
Herman Melville of *Moby Dick* fame—

The Borough of Universities—
Fordham, Hunter, Manhattan, NYU—
The world famous
Bronx Zoo and Botanical Gardens—
Unrivalled collections
of plants and animals—
almost a thousand acres of 'em—

Now across the East River—
Let's take two of the world's
most beautiful bridges—
the Whitestone,
and the Throgs Neck—

and arrive in the largest
borough of all—
Queens—
Home of the New York Mets—
at Shea Stadium
Olympic tennis courts
at Forest Hills—

Center of aviation—
LaGuardia Field,
and the world's largest airport
Kennedy International—

New York
300 years ago
a small trading post
on the tip of Manhattan—

In 1898
five boroughs
joined together
to create a city—
Today:
Center of civilization,
this electric metropolis
has opened opportunity to all,
and its reward
has been greatness—

And now, shall we step out,
onto the moving platform—
Now let's see New York
as you've never seen it before—

Step right out,
sample the collections
of world famous museums—

Yes, step right out,
and find out
just what keeps New York going—

Step right out
onto the moving platform—

PANORAMA FACT SHEET

Model of the Empire State Building on the Panorama.



Builders of the Panorama

The model was conceived by Robert Moses and constructed by Lester Associates of West Nyack, N.Y. It was paid for by New York City.

Original Purpose of the Panorama

The Panorama was built as New York City's display at the 1964-1965 World's Fair. After the Fair it served as a urban planning tool.

Dates of Construction

July 1961—April 1964.

Number of workers

It took over 100 full-time workers to construct the Panorama.

Cost

\$672,662.69 in 1964 U.S. Dollars

Updates

The Panorama was designed to stay current with the changing city. Complete updates took place in 1967, 1968, 1969, and 1974. Another complete update is planned for 1992.

Scale

1" = 100 feet (1:1200)

Total Area

9,335 square feet

Length at Longest Point

154 feet 6 inches from the Bronx city line at Westchester to tip of Staten Island at Perth Amboy.

Width at Widest Point

137 ft. from the west side of Manhattan to the Nassau County line.

Sizes on the Panorama

Approximate size of Manhattan—70' x 15'

Approximate size of Bronx—40' x 40'

Approximate size of Brooklyn—50' x 50'

Approximate size of Queens—60' x 75'

Approximate size of Staten Island—50' x 70'

Statue of Liberty—1 7/8" w/base 3 1/4"

Central Park—27 3/4" x 11' 3 1/4"

Verrazano-Narrows Bridge—5' 11 1/2" x 1", tower height 7"

Citicorp (Queens)—6 3/4" (H)

Brooklyn Bridge—3' 5 1/4" x 1", tower height 3"

George Washington Bridge—4' x 1 1/16", tower height 6"

Staten Island Ferry Ride—22'

Coney Island Beach—13' 4 1/4"

Queens Museum N.Y.C. Building—4 1/4" x 2 1/8", Height 1/2"

Empire State Building—15"

Estimated weight

45,000 lbs.

Number of Buildings

When the Panorama was originally completed in 1964 there were approximately 830,000 buildings; as of 1989 there are approximately 865,000 buildings.

Materials Used

The base of the Panorama is constructed out of urethane foam mounted on Formica flakeboard framed by pine boards; the buildings are made of wood and plastic; the bridges are brass.

Special Features of the Panorama

A continuous lighting cycle that goes from dawn to dusk to night.

3,172 colored lights showing the location of municipal facilities.

Moving airplanes that land every minute at La Guardia Airport

Panorama Trivia

The Panorama is constructed in 273 sections. Because of size restrictions, the section showing Far Rockaway was never installed.

Two workers left their names spelled in shrubbery. Look for Bill and Ed on two islands in Jamaica Bay.

How to Visit the Panorama

The model is located at:

**THE QUEENS MUSEUM
NEW YORK CITY BUILDING
FLUSHING MEADOW-CORONA PARK
FLUSHING, NY. 11368-3398
TELEPHONE: (718) 592-2405.**

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